

**REMARKS**

The Amendment, filed in response to the Office Action (“Action”) mailed February 18, 2009, is believed to fully address all and every issue raised in the Action. Favorable reconsideration of the application is respectfully requested.

**Claims Disposition and Amendment**

Claims 7-12 were pending in the application and rejected. Claim 1-6 were previously canceled.

Upon entry of the amendment, which is respectfully requested, claims 7, 9, 11 and 12 will be all the claims pending in the application. Claims 7 and 9 are amended to incorporate the feature of claims 8 and 10, respectively. Amended claims 7 and 9 excludes DLC (diamond-like carbon) protection film. Claim 11 is amended similarly. Amended claims 7, 9, and 11 further recite that the thickness of the protection film is 1 - 5  $\mu\text{m}$ , which is supported by the disclosure of, for example, page 8, first full paragraph and page 11, paragraph [0029] of the specification. Claims 8 and 10 are canceled. No new matter is introduced.

**Formal Matters**

Applicant notes that the Office Action Summary indicates under “Disposition of Claims” that claims 1-6 are pending and claims 1-7 are rejected, while the Detailed Office Action correctly considers and discusses pending claims 7-12. It is requested to include a correct identification of claim numbers in a next Action.

Applicant thanks the Examiner for acknowledging claim for foreign priority and receipt of the certified copies of the priority documents as well as copies of the certified copies of the priority documents.

Applicant further thanks the Examiner for returning an initialed copy of the SB/08 filed July 19, 2006, indicating that the references listed therein are considered.

**Response to Objections to the Specification and Claims**

The specification is objected to in paragraphs 9 and 15 because of the typographical error "spattering." Claim 11<sup>1</sup> is objected to for the same reason.

In response, the specification and claim 11 are amended according to the suggestions by the Examiner to correct the typographical error "spattering" to "sputtering." Withdrawal of the objections is respectfully requested.

**Response to Claim Rejection - 35 U.S.C. § 112**

In the Action, claims 8 and 10 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Office indicates that the "like" and "type" render the claims indefinite.

Claims 8 and 10 are canceled, rendering the rejection moot. Withdrawal of the rejection is respectfully requested.

**Response to Claim Rejection - 35 U.S.C. § 102(b)**

In the Action, Claims 7 and 8 stand rejected under 35 U.S.C. 102(b) as being anticipated by Komatsu (JP 11-026155A).

The Office asserts that Komatsu discloses a protection film for an electroluminescent element where as the diamond-like carbon (DLC) protective film (abstract) and the film has a

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<sup>1</sup> The Action indicates that claim 15 is objected to. However, Applicant believes that is a typographical error of claim 11.

hydrogen content of 50 atm%, preferably, below 45 atm%, it adjusts so that it may become 40 atm% (paragraph 12).

Without acquiescing the rejection, claim 7 is amended to recite that the protection film is one of SiN, SiO, SiON, SiC or SiCN (which is supported by claim 8). Komatsu discloses only DLC film as a protective film. Thus, the subject matter of amended Claim 7 is not anticipated by Komatsu, at least for the above reasons.

Accordingly, it is believed that the rejection is not sustainable and its withdrawal is respectfully requested.

**Response to Rejection under 35 U.S.C. § 103(a)**

**Claims 7, 9, 11, and 12 are patentable over Yamazaki**

In the Action, Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (2003/0184217).

The Office asserts that Yamazaki discloses a protective thin film formed on a substrate which has a hydrogen content of 5 to 30 atm% (paragraphs 10 and 116), and the protective film can be SiN or SiON (paragraph 247), SiO (paragraph 133), and DLC (paragraph 116). The Office contends that the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made, because one having ordinary skill in the art would have selected a value of 30 at % H in the films disclosed by Yamazaki with a reasonable expectation of producing a film having providing suitable hardness, oxygen and moisture resistance.

Applicant respectfully traverses.

Applicant notes that Yamazaki discloses as a protective film of SiN, SiON, and DLC. In this regard, Applicant submit that Yamazaki fails to teach a SiO protective film, as opposed to

the Office's assertion that Yamazaki discloses one. In Yamazaki, SiO film is disclosed as a insulating film, but not as a protective film.

Also, it is noted that Yamazaki discloses that the DLC film has a hydrogen content of 5-30 atm%. In this regard, although the 30 atm% of the hydrogen content of DLC in Yamazaki overlaps the range of the present invention (not less than 30%), Applicant submits that the basic concept for the hydrogen content of the present invention (relatively high hydrogen content) is distinguished from that of Yamazaki (relatively low hydrogen content). Further, the disclosed hydrogen content is only for DLC in Yamazaki. Yamazaki fails to disclose or suggest a hydrogen content of SiN, SiO, SiON, SiC or SiCN protection films.

In addition, Yamazaki teaches that the thickness of DLC protection film is 3 - 50 nm (i.e., 0.003 - 0.05  $\mu\text{m}$ ). Yamazaki, even though it discloses a SiN and SiON protective film, is silent about the thickness of the SiN and SiON protective film.

However, currently presented claims 7, 9, and 11 of the instant application each recite that the protection film is one of SiN, SiO, SiON, SiC or SiCN, and the protection film has a thickness of 1 - 5  $\mu\text{m}$ , which is far greater than the thickness of DLC of Yamazaki. As discussed above, Yamazaki is silent about the thickness of other protection layers. Neither it suggests or implies to modify the thickness when SiN or SiON protective film is used.

The present invention provides a highly reliable protective film owing to a relatively high hydrogen content and a relatively thick thickness.

None of the references, alone or in combination, teaches or suggests a such thick protective film of such a high hydrogen content.

Thus, Applicant respectfully submits that the subject matter of amended Independent Claims 7, 9, and 11, and dependent claim 12 are not obvious from Yamazaki.

Claims 7, 9, 11, and 12 are patentable over Komatsu

In the Action, claims 7 and 8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu (JP 11-026155A).

Komatsu is relied upon to teach protective films having a H at % of less than 50. The Office asserts that Komatsu also discloses that, when the hydrogen concentration becomes low, the resulting film has more diamond character (hardness) and when the hydrogen concentration is high the resulting film has more graphite character resulting in a loss in hardness (paragraph 8). The Office takes the position that it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the hydrogen concentration to a suitable level to optimize the film barrier protection.

Applicant respectfully traverses.

Komatsu only discloses a DLC protective film that is different from the subject matter of currently amended Claim 7. Further, Komatsu discloses the thickness of the DLC protective film is *not more than 0.5  $\mu$ m*, which is outside the range claimed in currently amended Claim 7. Komatsu fails to teach or suggest the types and thickness of the protective films recited in currently presented claim 7.

Accordingly, it is believed that the rejections are not sustainable and withdrawal is respectfully requested.

**Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number **202-775-7588**.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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